

REMARKS/ARGUMENTS

Applicants provide herewith an amendment to the claims as described above. Support for the amended claims and new claim is found in the specification as originally filed, and is further discussed below. Applicants submit that no new matter has been added by way of the above Amendment. Accordingly, entry of the Amendment is respectfully requested.

The Office Action dated April 30, 2008, included claim rejections based on alleged anticipation (35 U.S.C. § 102) and obviousness (35 U.S.C. § 103). Applicants traverse all rejections to the extent that they may be applied to the amended claims, for the reasons noted below. The present Response with Amendment is fully responsive to each of the Examiner's points, and Applicants respectfully request reconsideration of the claims in view of the amendments and remarks herein.

THE STATUS OF THE CLAIMS

Claims 26, 27, 31, 36, 43-47, and 50-52 are withdrawn.

Claims 2-4, 6-9, 11-17, 19, 20, 24, 25, 28-30, 32-35, 37-42, 48, 49, 53 and 54 are cancelled.

Claim 1 is currently amended herein.

Following entry of the present amendment, Claims 1, 5, 10, 18 and 21-23 are pending and presently under examination.

This amendment to the claims does not introduce new matter. These amendments are made without prejudice and are not to be construed as abandonment of any originally claimed subject matter or agreement with any objection or rejection of record. Support for the amended claim 1 is found throughout the specification as originally filed. For example, use of leaf base or core section material for explantation is described in paragraph 0067 and Example 1 at paragraph 0139. Regeneration of a plant from transformed organogenic material without going through a callus intermediate stage is described on page 1, lines 17-21 and 23-29, and further, also finds support in original claim 17 (now cancelled).

35 U.S.C. §102

In the Office Action dated April 30, 2008, claims 1, 5, 10, 18 and 21-23 were rejected under 35 U.S.C. §102(a) as allegedly anticipated by Mezzetti *et al.* (2002) “Genetic transformation of *Vitis vinifera* via organogenesis,” *BMC Biotechnology* 2:18. The Examiner alleges that Mezzetti *et al.* discloses methods for producing transformed plant material that teach all of the limitations of claim 1.

Applicant respectfully disagrees, and traverses this rejection. Solely for the purpose of advancing the prosecution of the present application, and without acquiescing to the Examiner’s rejection, the Applicant has amended claim 1. Rebuttal to the Examiner’s rejection is made in view of the amended form of claim 1. In order for a reference to anticipate a claim, the reference must teach each and every element of the claim (MPEP 2131). Mezzetti *et al.* falls short of anticipating the currently amended claim 1.

The present invention provides methods for producing transformed cells and plants without the need for a callus intermediate stage (either before or after transformation). This feature is reflected in the currently amended claim 1. In contrast, Mezzetti *et al.* clearly describes the generation of meristematic bulk (a cellular aggregate with elevated regenerative capacity), *i.e.*, a callus, prior to transformation. See Mezzetti *et al.* in the abstract and page 2, in the paragraph spanning the first and second columns. Furthermore, in the Office Action, the Examiner admits that Mezzetti *et al.* employs a “meristematic bulk” intermediate step. Because Mezzetti *et al.* employs a callus intermediate, Mezzetti *et al.* does not meet each of the limitations of the currently amended claim 1.

Applicant asserts that the amended form of claim 1 is novel, and it follows that each claim that depends from claim 1 must also be novel. Because Mezzetti *et al.* does not teach each element of the claimed invention, Applicant respectfully requests that this rejection be withdrawn.

35 U.S.C. § 103(a)

In the present Office Action, the Examiner rejected claims 1, 5, 10, 18 and 21-23 (all claims currently under examination) under 35 U.S.C. §103(a) as allegedly obvious and unpatentable over Mezzetti *et al.* further in view of US 6,653,530.

Applicant respectfully disagrees, and traverses this rejection. Solely for the purpose of advancing the prosecution of the present application, and without acquiescing to the Examiner's rejection, the Applicant has amended claim 1. Rebuttal of the Examiner's rejection is made in view of the amended form of claim 1.

A *prima facie* case of obviousness requires that the prior art reference(s) must teach all of the limitations of the claims. The combination of the art cited, taken with the general knowledge in the field, must provide all of the elements of the claimed invention (M.P.E.P. § 2142-2143). No combination of the art cited by the Examiner satisfies this prong of 103(a) with regard to the amended version of claim 1.

Mezzetti *et al.*, describes a grape transformation system, as discussed in detail above. US 6,653,530 provides methods for increasing carotenoid compounds in plants by transformation and expression of genes that regulate carotenoid biosynthesis. In the Office Action, the Examiner states on page 4 that the Applicant "would have a reasonable expectation of success of combining the two to yield transformed grapes that produce altered carotenoid profiles given the success of both Mezzetti and the '530 patent."

Applicants point out that claim 1 of the present application is silent with regard to any limitation on "nucleic acid segment" and carotenoid production, and thus, the combination of US 6,653,530 with Mezzetti *et al.* does not generate any justification for rejection of claim 1 under 35 U.S.C. §103(a) beyond the use of Mezzetti *et al.* alone.

The present invention provides methods for producing transformed cells and plants without the need for a callus intermediate stage, which limitation is reflected in the currently amended claim 1. As discussed above, Mezzetti *et al.* is deficient on that point. Similarly, the cell transformation systems used in US 6,653,530 are also deficient on that point (see, for example, the methodologies used in US 5,004,863, which is cited by US 6,653,530 at column 29, lines 20-28). Further, any combination of Mezzetti *et al.* and US 6,653,530 also fails to teach a protocol for the production of transformed plants that is devoid of a callus stage. Thus, the combination of the art cited fails to provide all of the elements of claim 1, and a rejection under 35 U.S.C. §103(a) can not stand.

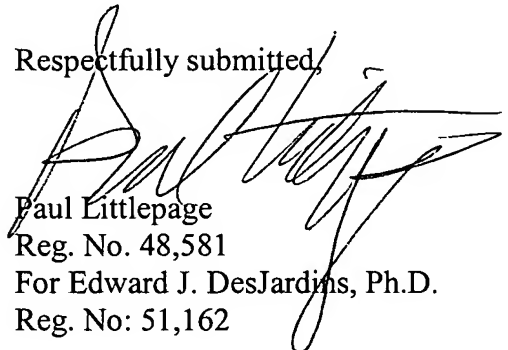
Applicant reasserts that the amended form of claim 1 is non-obvious, and it follows that each claim that depends from claim 1 must also be non-obvious. Because the

combination of prior art cited by the Examiner does not teach each element of the claimed invention, Applicants respectfully request that this rejection be withdrawn.

CONCLUSION

In view of the foregoing, Applicants believe that all claims now pending in this application are definite, novel and non-obvious, and are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

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Attachments:

- 1) a transmittal sheet;
- 2) a fee transmittal sheet;
- 3) petition for one month extension; and
- 4) a receipt acknowledgement postcard.